

STAKE TREE WITH (2) TREATED 2"Ø LODGEPOLE PINE DOWELED TREE STAKES (8'-0" LENGTH) LOOP EACH TIE AROUND HALF TREE LOOSELY TO PROVIDE 1" SLACK FOR TRUNK GROWTH

"CHAINLOCK" OR EQUAL TREE TIE MATERIAL (1" WIDTH) NAIL OR STAPLE TREE TIE MATERIAL TO STAKE TO HOLD VERTICALLY. LOOP EACH TIE AROUND HALF TREE LOOSELY TO PROVIDE 1" SLACK FOR TRUNK GROWTH

2"-3" MULCH DEPTH (TAPERED AT TRUNK)

MULCH TREE PIT MIN 5'-0" LENGTH X FULL PLANTING STRIP WIDTH BETWEEN CURB AND SIDEWALK (FOR PLANTING STRIPS LESS THAN 6'-0" WIDE.) PROVIDE 5'-0"Ø MULCH RING FOR PLANTING STRIPS WIDER THAN 6'-0"

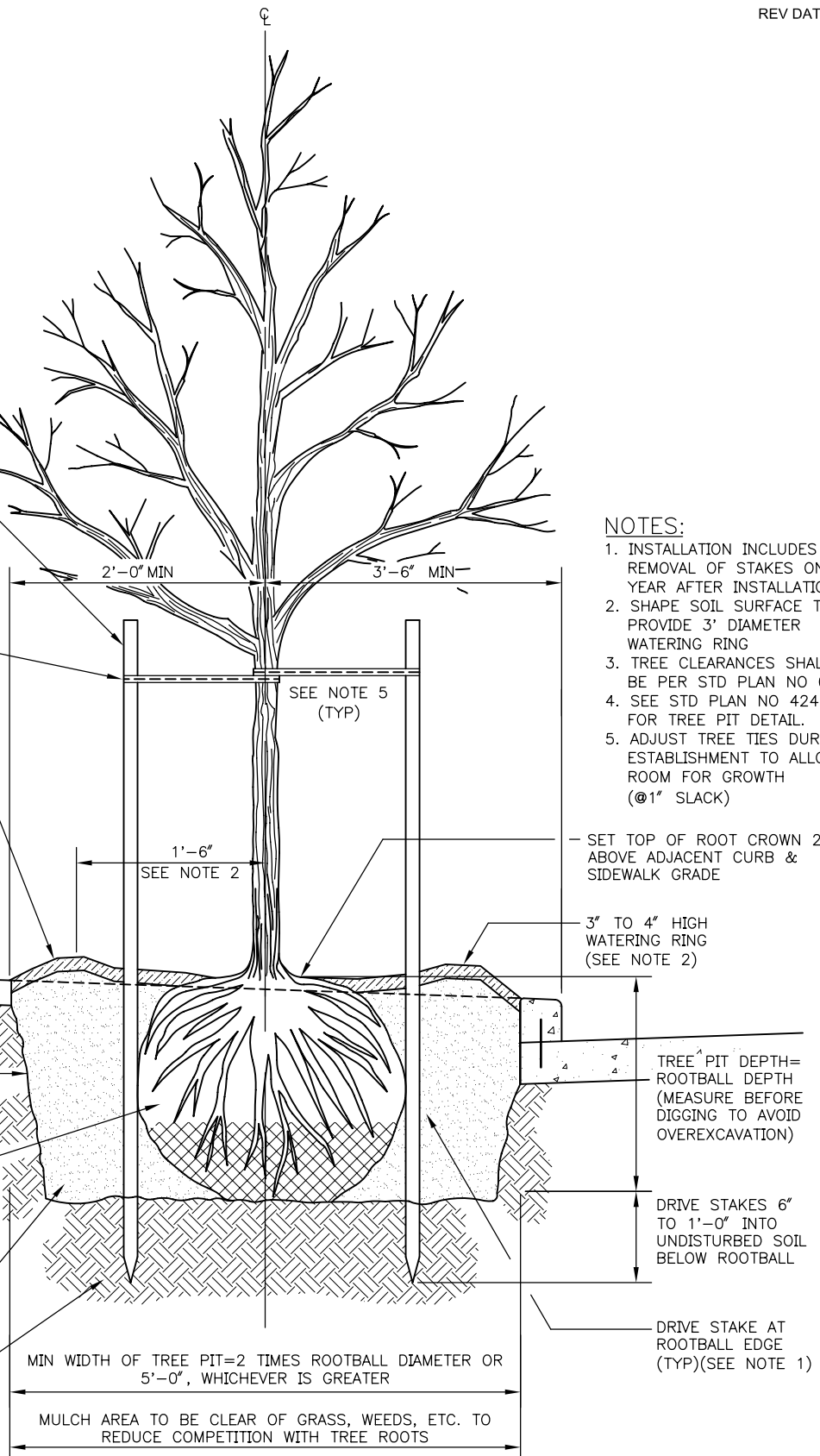
SIDEWALK

ROUGHEN SIDES OF PLANTING HOLE. MAXIMIZE EXCAVATED AREA WITHOUT UNDERMINING ADJACENT PAVING/CURB

REMOVE ALL WIRE & STRING, AND REMOVE ALL BURLAP FROM TOP 2/3 OF ROOTBALL

NATIVE BACKFILL SOIL AMENDMENT WITH 25% (@1/3 CU YD) DECOMPOSED ORGANIC MULCH AMENDMENT FOR ENTIRE TREE PIT AREA X ROOTBALL DEPTH

UNDISTURBED SUBGRADE (PROVIDES FIRM BASE SO THAT ROOTBALL WILL NOT SINK)



#### NOTES:

1. INSTALLATION INCLUDES REMOVAL OF STAKES ONE YEAR AFTER INSTALLATION
2. SHAPE SOIL SURFACE TO PROVIDE 3' DIAMETER WATERING RING
3. TREE CLEARANCES SHALL BE PER STD PLAN NO 030
4. SEE STD PLAN NO 424 FOR TREE PIT DETAIL.
5. ADJUST TREE TIES DURING ESTABLISHMENT TO ALLOW ROOM FOR GROWTH (@1" SLACK)

— SET TOP OF ROOT CROWN 2" ABOVE ADJACENT CURB & SIDEWALK GRADE

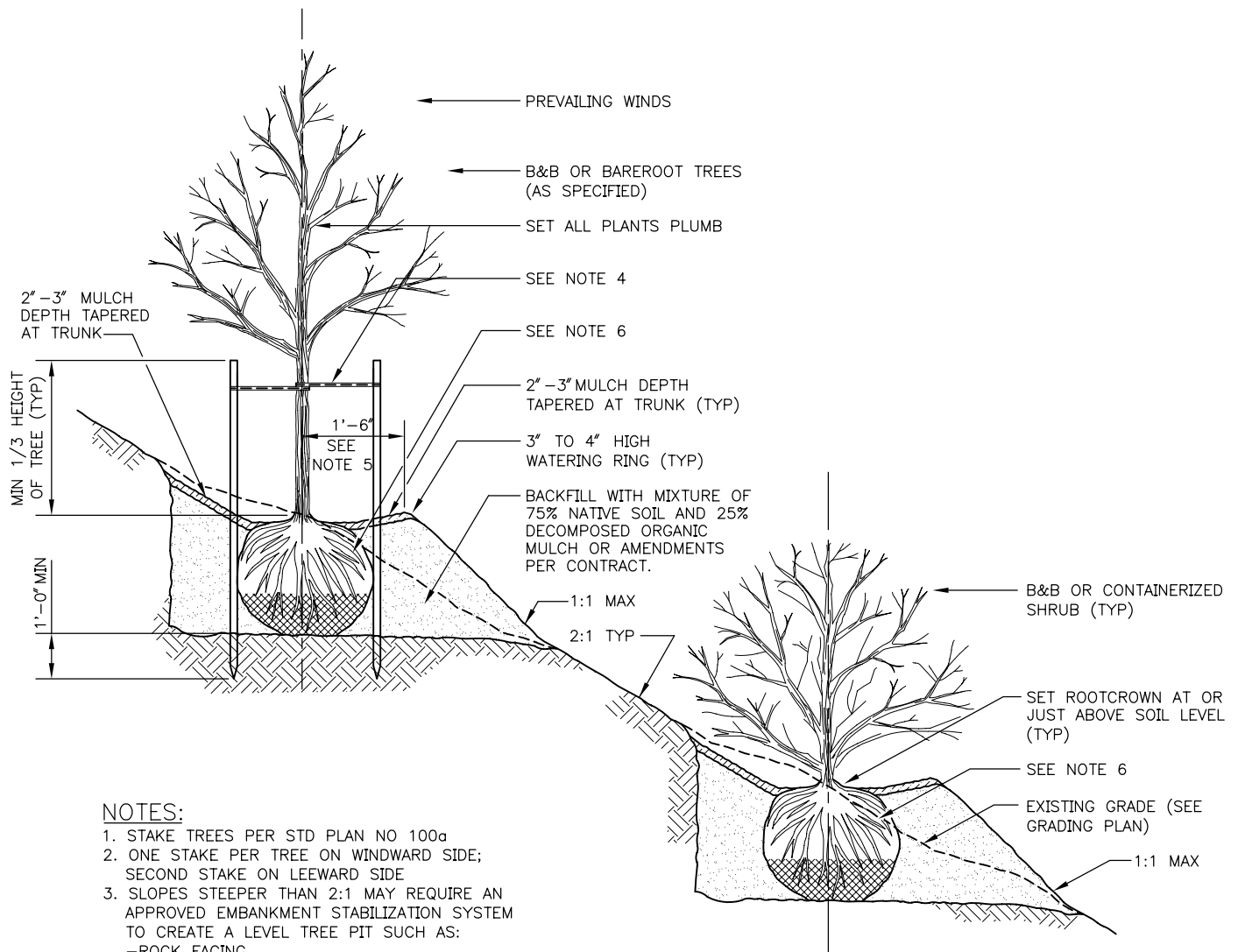
REF STD SPEC SEC 8-02



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NOT TO SCALE

DECIDUOUS TREE PLANTING  
IN PLANTING STRIP

**NOTES:**

1. STAKE TREES PER STD PLAN NO 100a
2. ONE STAKE PER TREE ON WINDWARD SIDE; SECOND STAKE ON LEEWARD SIDE
3. SLOPES STEEPER THAN 2:1 MAY REQUIRE AN APPROVED EMBANKMENT STABILIZATION SYSTEM TO CREATE A LEVEL TREE PIT SUCH AS:
  - ROCK FACING
  - PRECAST CONCRETE WALL UNITS
  - TIMBER WALL
  - MANUFACTURED SLOPE RETENTION UNITS
4. CHAINLOCK TREE TIE. LOOP EACH TIE AROUND TREE LOOSELY TO PROVIDE 1" SLACK FOR DIAMETER GROWTH.
5. SHAPE SOIL TO PROVIDE 3' DIAMETER OR ROOTBALL DIAMETER, WHICHEVER IS GREATER, WATERING RING.
6. REMOVE ALL WIRE AND STRING. REMOVE TOP 2/3 OF BURLAP.

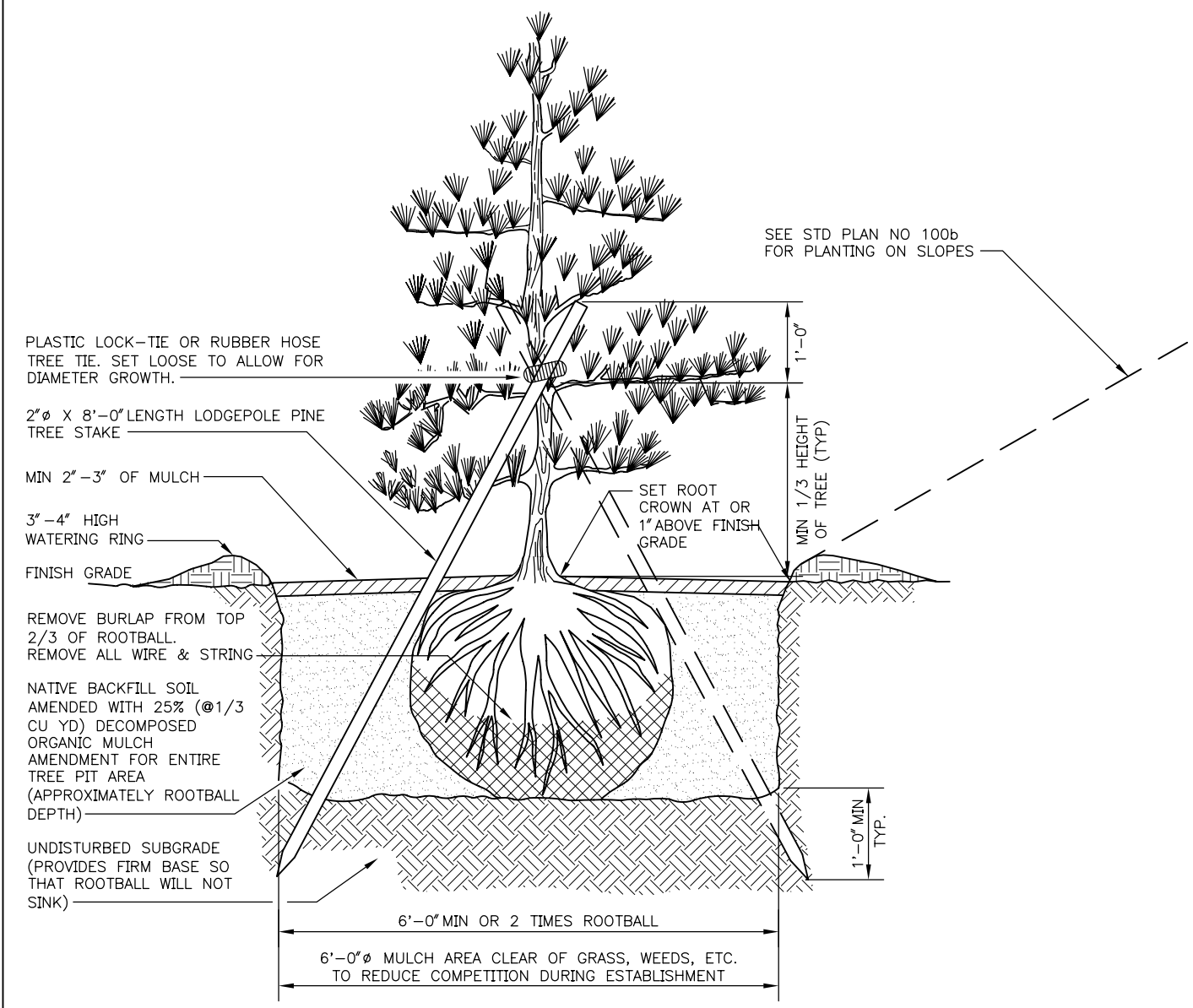
REF STD SPEC SEC 8-02



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TREE & SHRUB PLANTING  
ON SLOPES



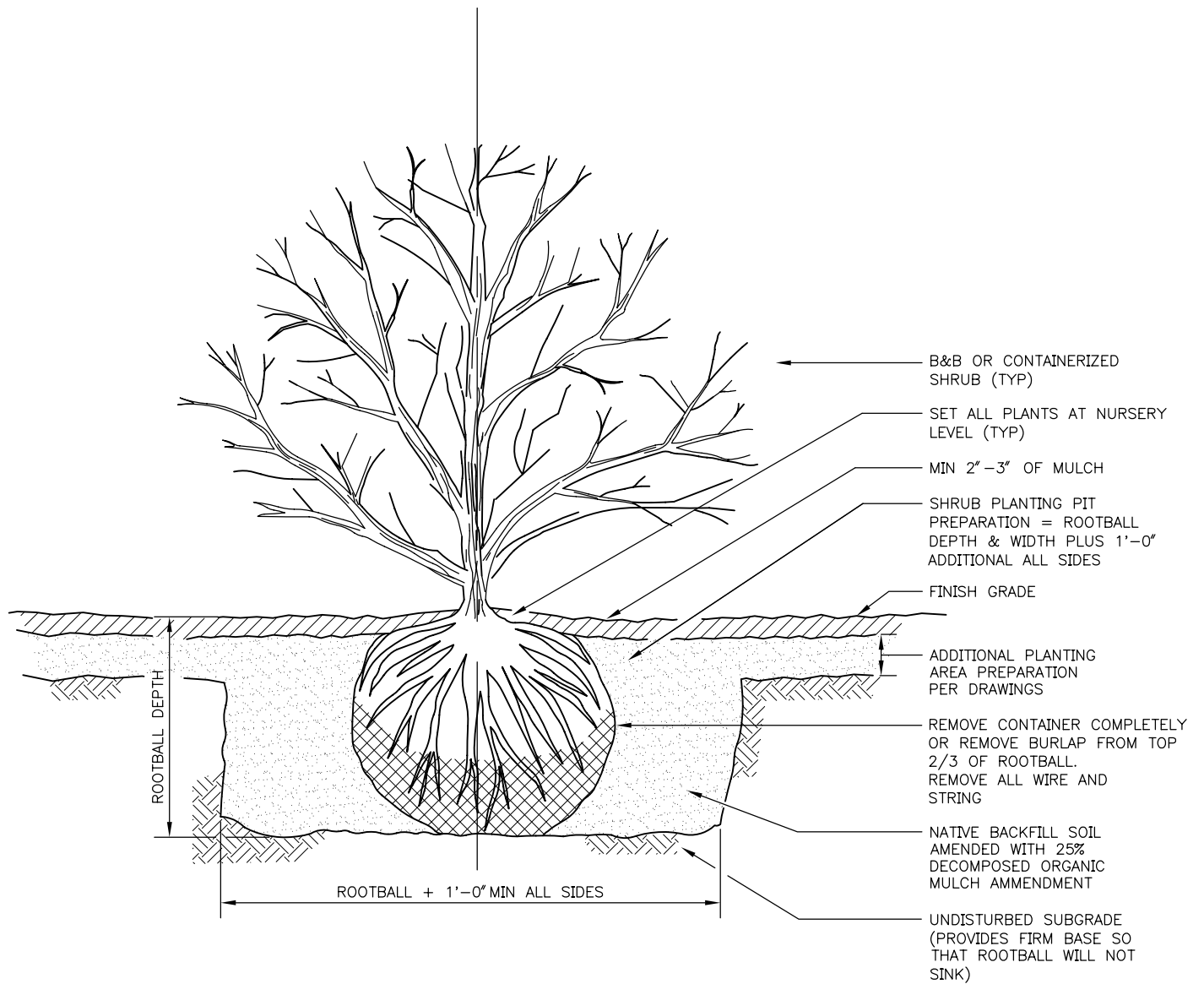
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CONIFEROUS TREE PLANTING



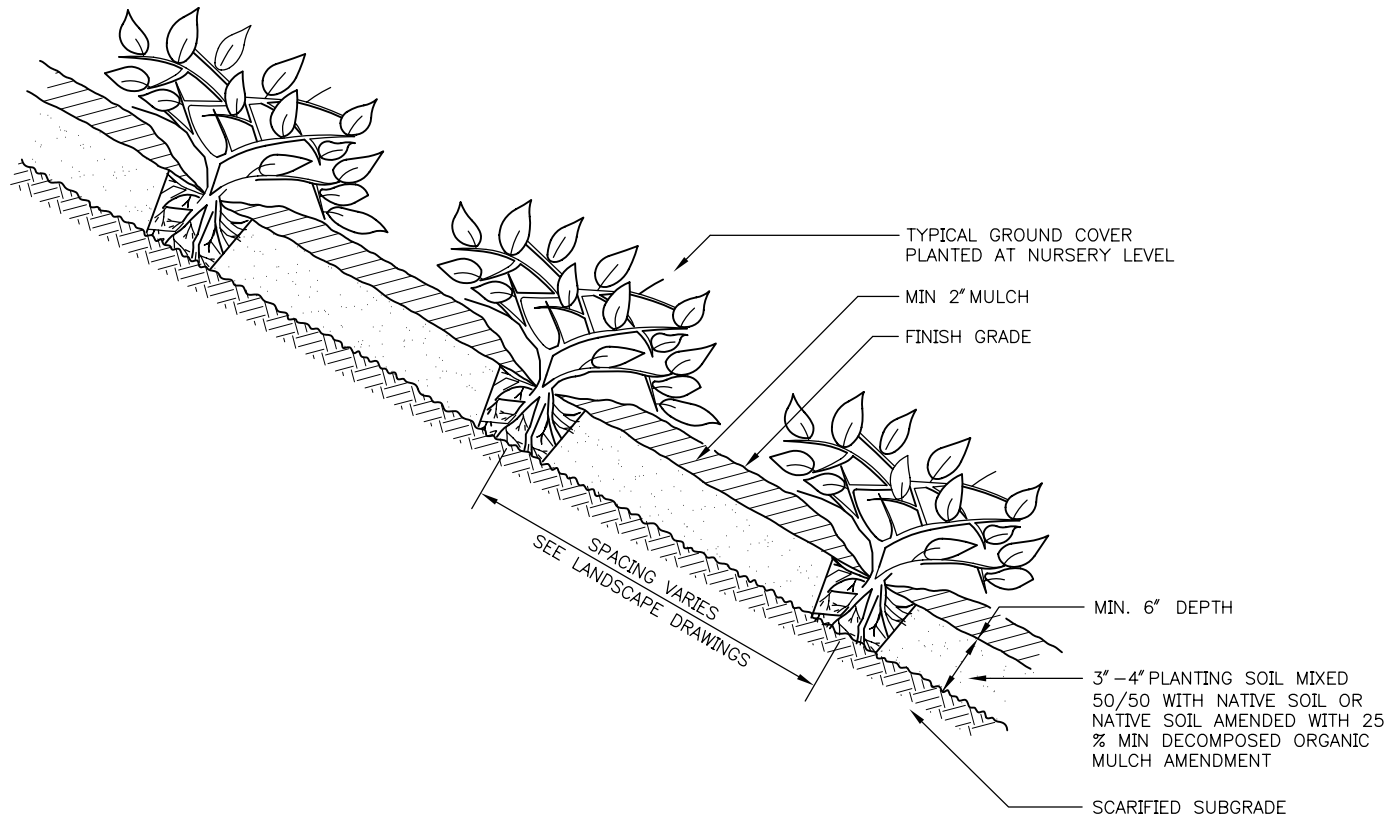
REF STD SPEC SEC 8-02



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SHRUB PLANTING



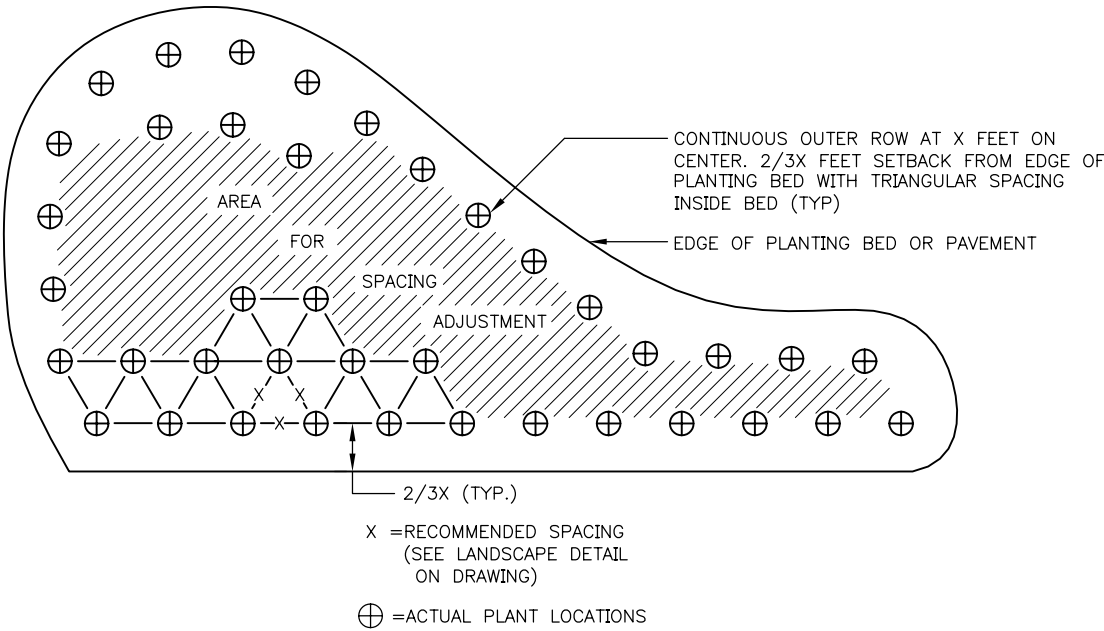
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GROUND COVER PLANTING



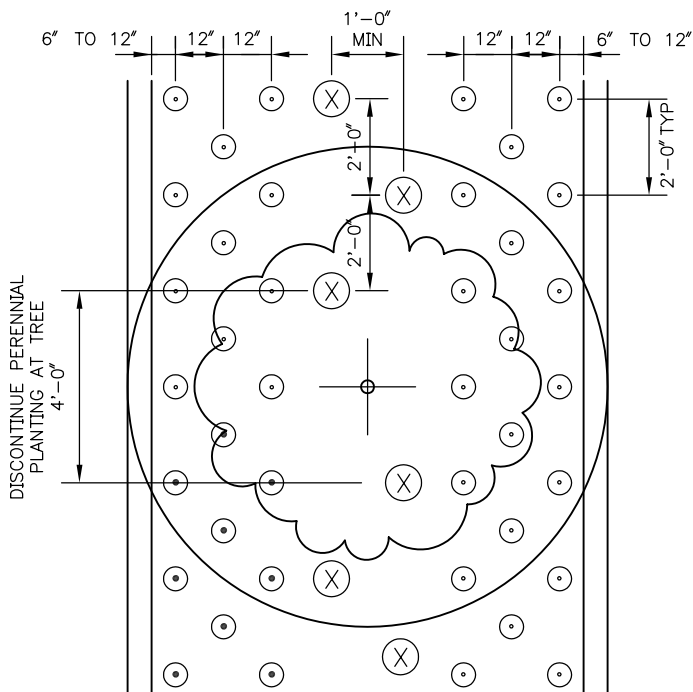
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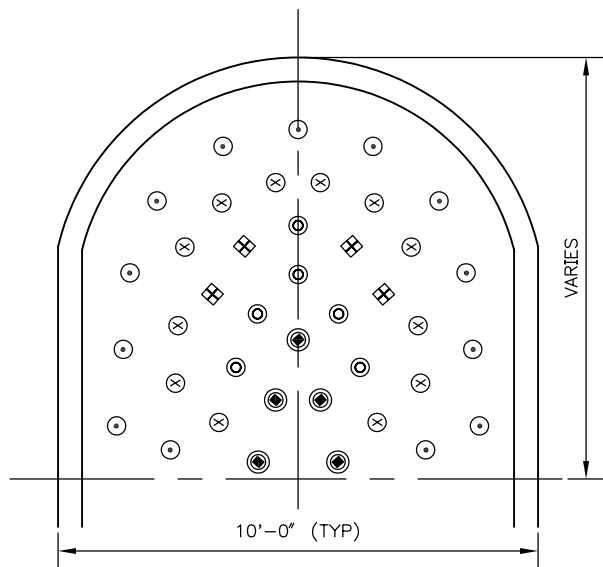
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PLANTING PATTERN



DETAIL AT TREE PLAN

○ GROUNDCOVER	30
⊗ SHRUB	5



QUANT PER END CAP

⊗ PERENNIAL TYPE 1	4
⊙ PERENNIAL TYPE 2	6
⊗ PERENNIAL TYPE 3	5
○ EVERGREEN GROUNDCOVER TYPE 1	13
⊗ EVERGREEN GROUNDCOVER TYPE 2	12

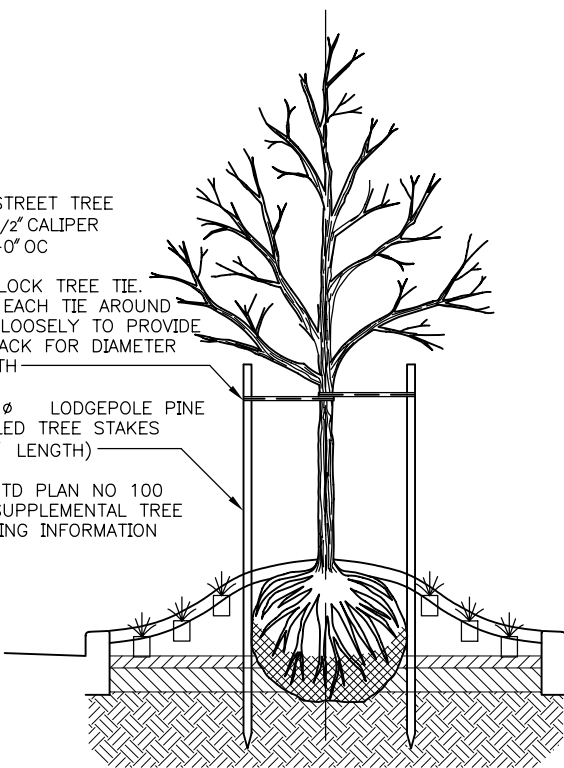
END CAP DETAIL

TYP STREET TREE  
2" - 2 1/2" CALIPER  
@ 30' - 0" OC

CHAINLOCK TREE TIE.  
LOOP EACH TIE AROUND  
TREE LOOSELY TO PROVIDE  
1" SLACK FOR DIAMETER  
GROWTH

(2) 2" ⌀ LODGEPOLE PINE  
DOWELED TREE STAKES  
(8' - 0" LENGTH)

SEE STD PLAN NO 100  
FOR SUPPLEMENTAL TREE  
PLANTING INFORMATION

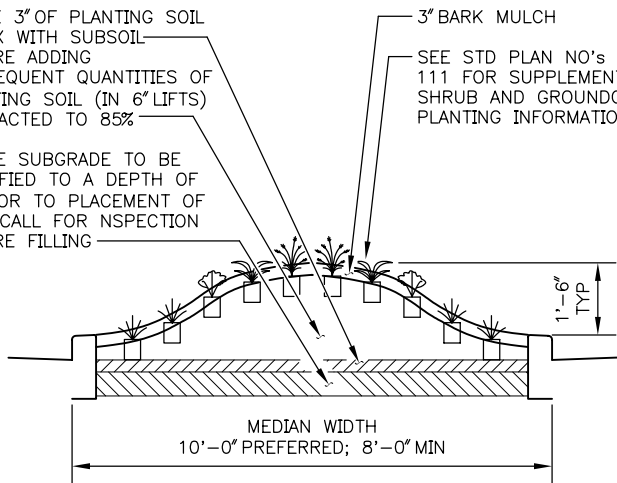


PLACE 3" OF PLANTING SOIL  
& MIX WITH SUBSOIL  
BEFORE ADDING  
SUBSEQUENT QUANTITIES OF  
PLANTING SOIL (IN 6" LIFTS)  
COMPACTED TO 85%

NATIVE SUBGRADE TO BE  
SCARIFIED TO A DEPTH OF  
6" PRIOR TO PLACEMENT OF  
FILL. CALL FOR INSPECTION  
BEFORE FILLING

3" BARK MULCH

SEE STD PLAN NO's 110 &  
111 FOR SUPPLEMENTAL  
SHRUB AND GROUNDCOVER  
PLANTING INFORMATION



REF STD SPEC SEC 8-02



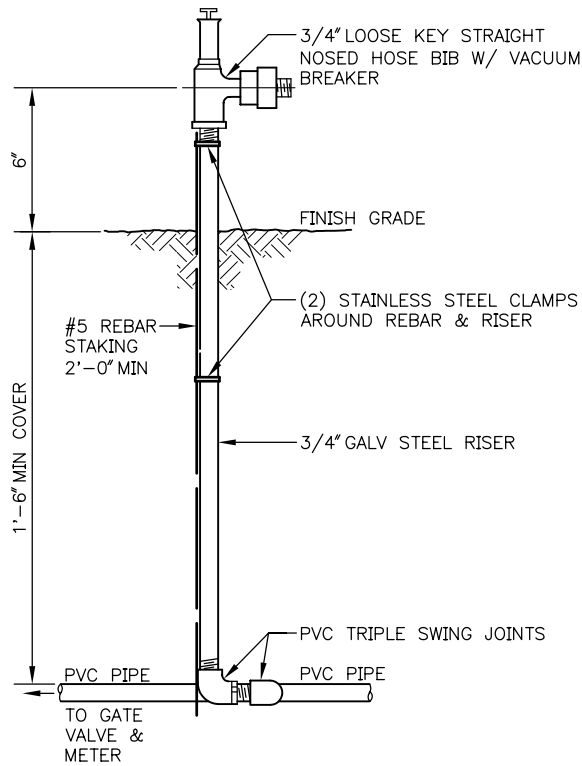
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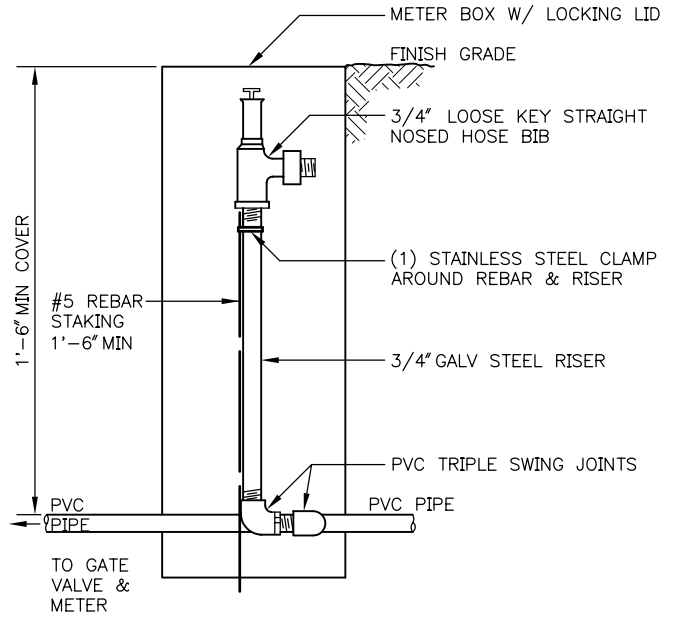
MEDIAN PLANTING

# STANDARD PLAN NO 121

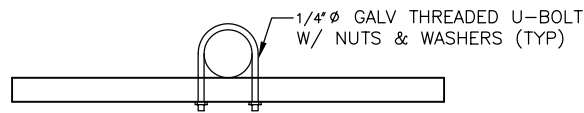
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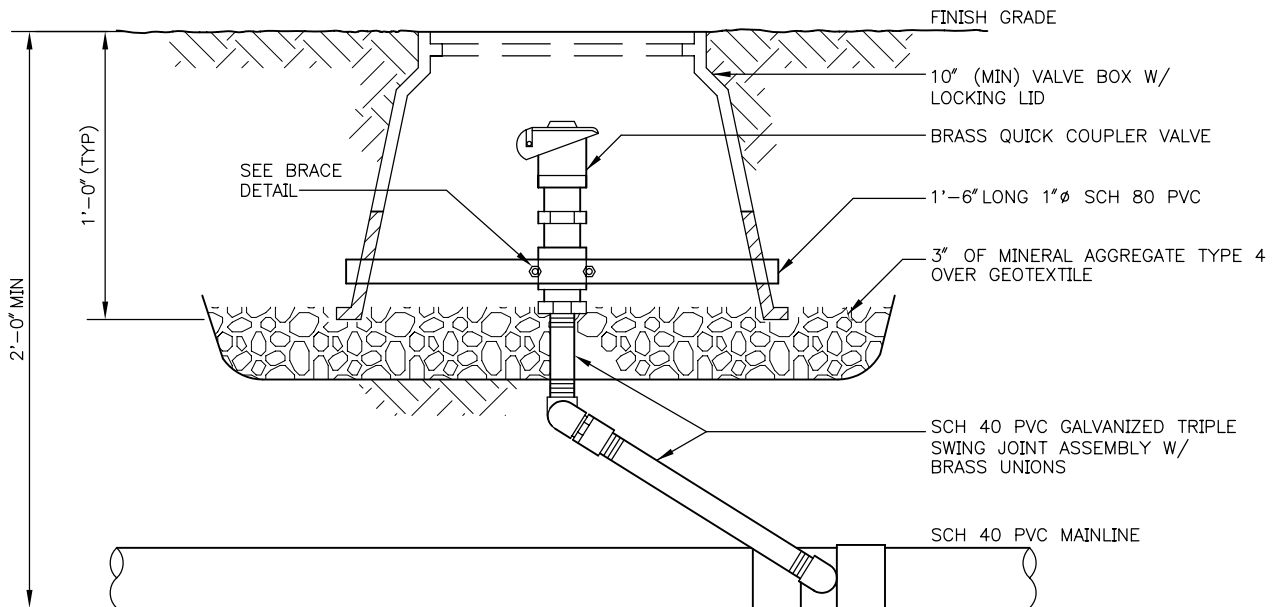
ABOVE GROUND HOSE BIB



BELOW GROUND HOSE BIB



BRACE DETAIL - PLAN VIEW



ELEVATION VIEW

QUICK COUPLER VALVE  
TURF OR BED AREAS

REF STD SPEC SEC 8-03

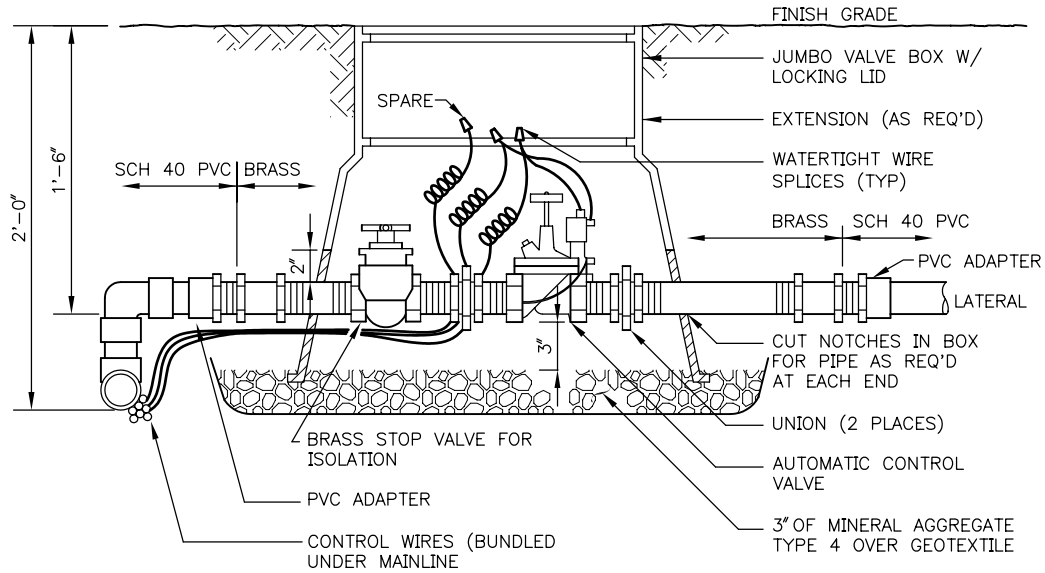


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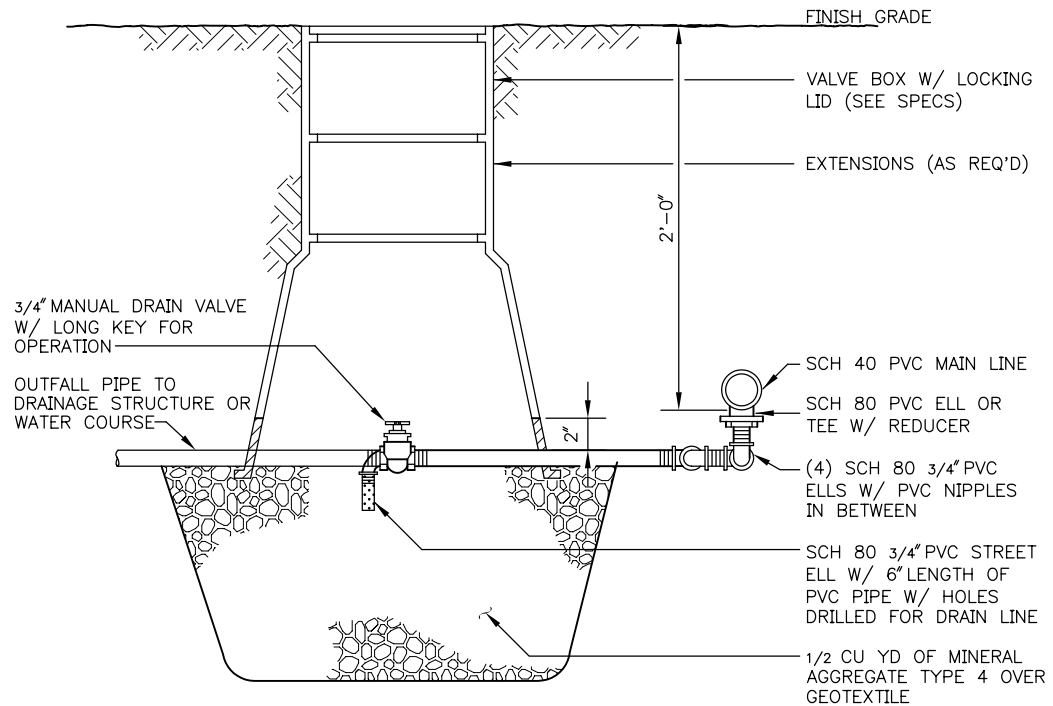
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HOSE BIB ASSEMBLY AND  
QUICK COUPLER VALVE



**NOTE:**

"U" SHAPED CUT-OUT IN VALVE BOX THAT ALLOWS 2" CLEARANCE FROM TOP OF PIPE TO TOP OF "U"

AUTOMATIC CONTROL VALVEMANUAL DRAIN VALVE

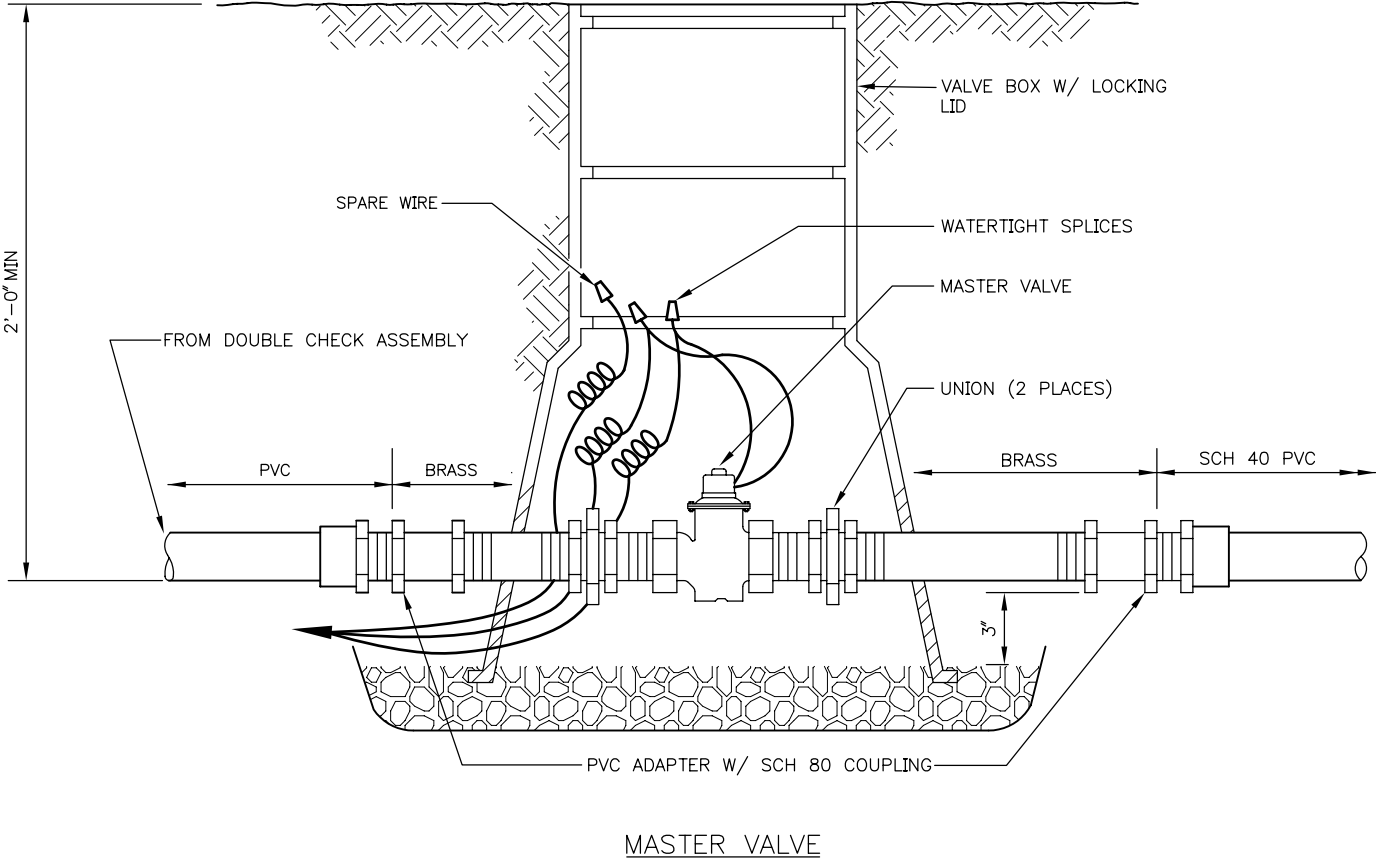
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IRRIGATION VALVES



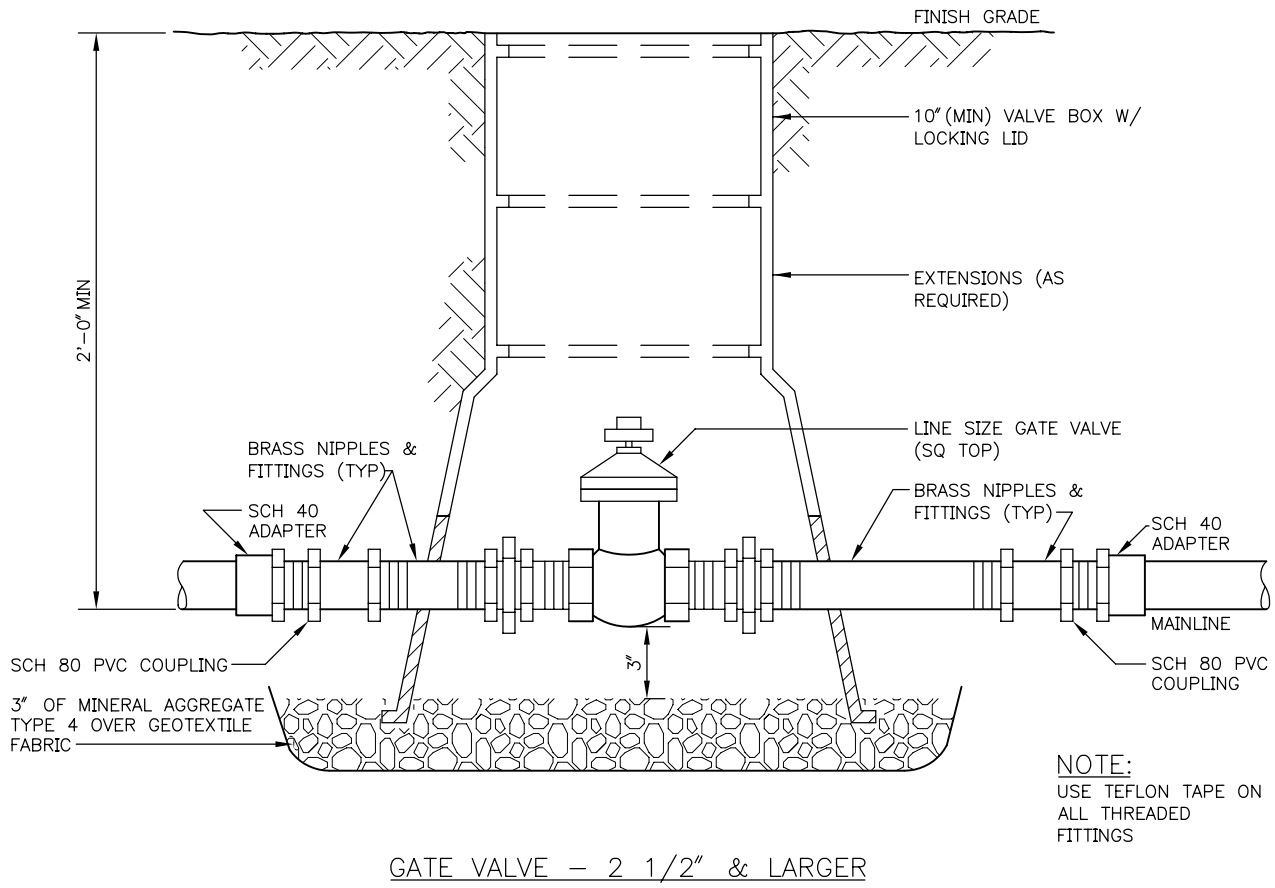
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IRRIGATION VALVES



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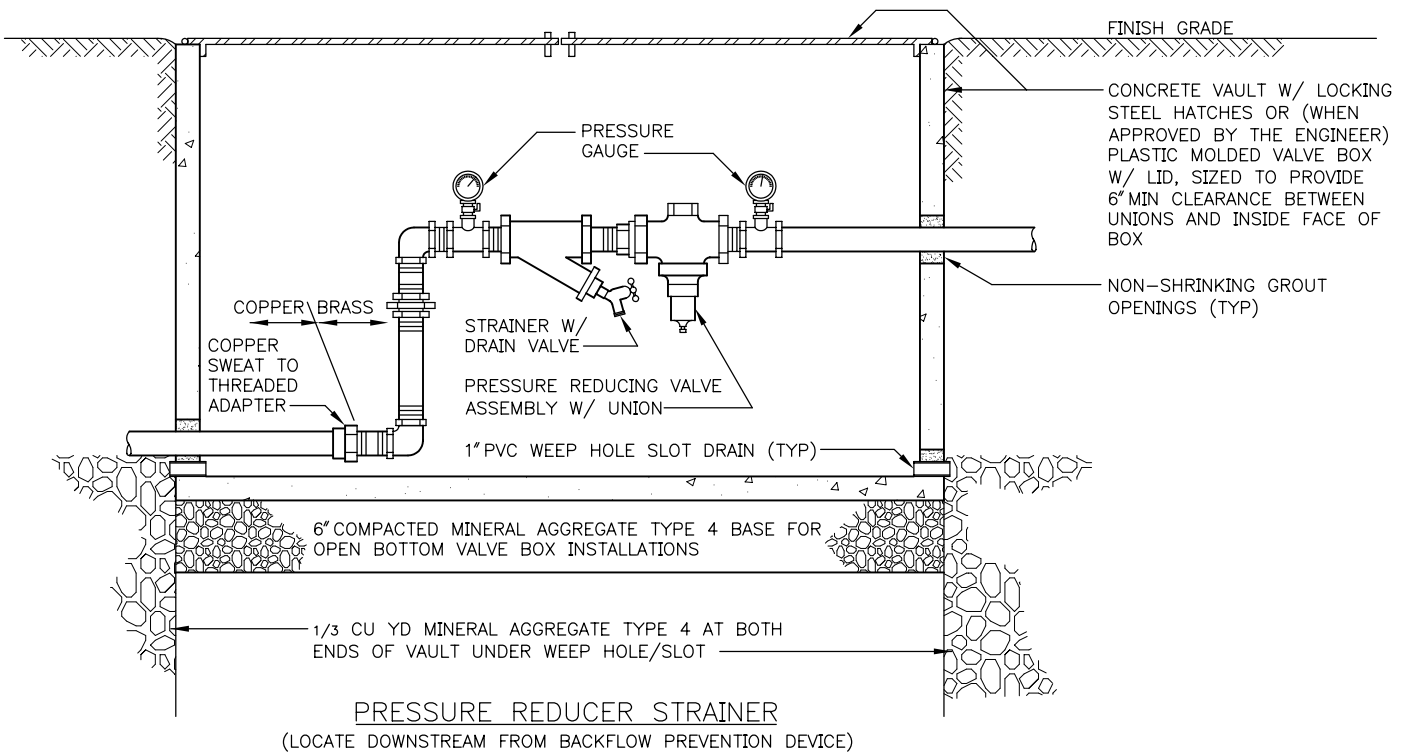
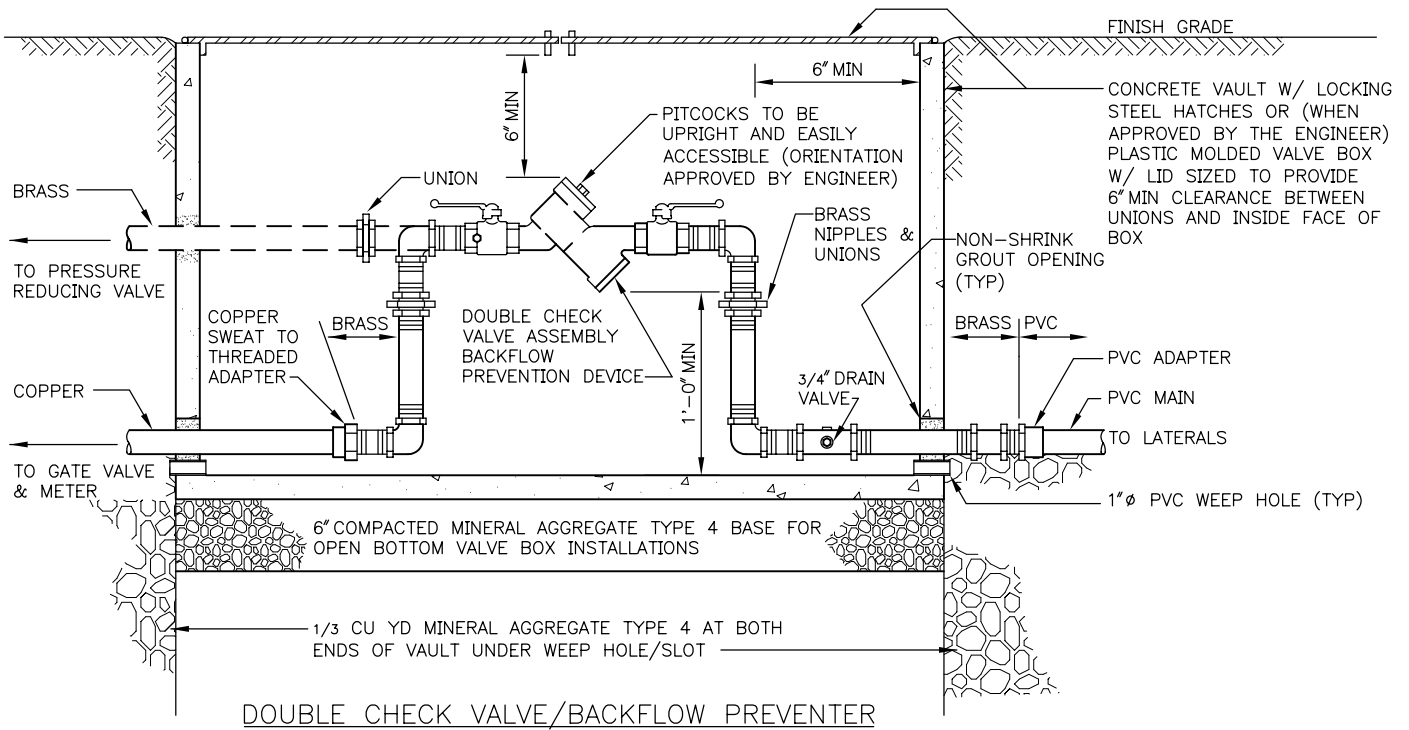


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IRRIGATION VALVES

## REV DATE: 2003



REF STD SPEC SEC 8-03



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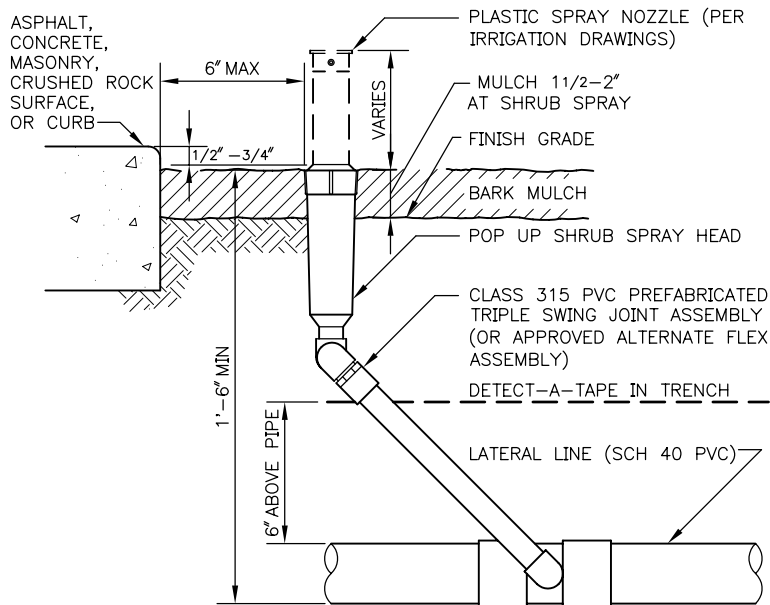
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## IRRIGATION VALVES

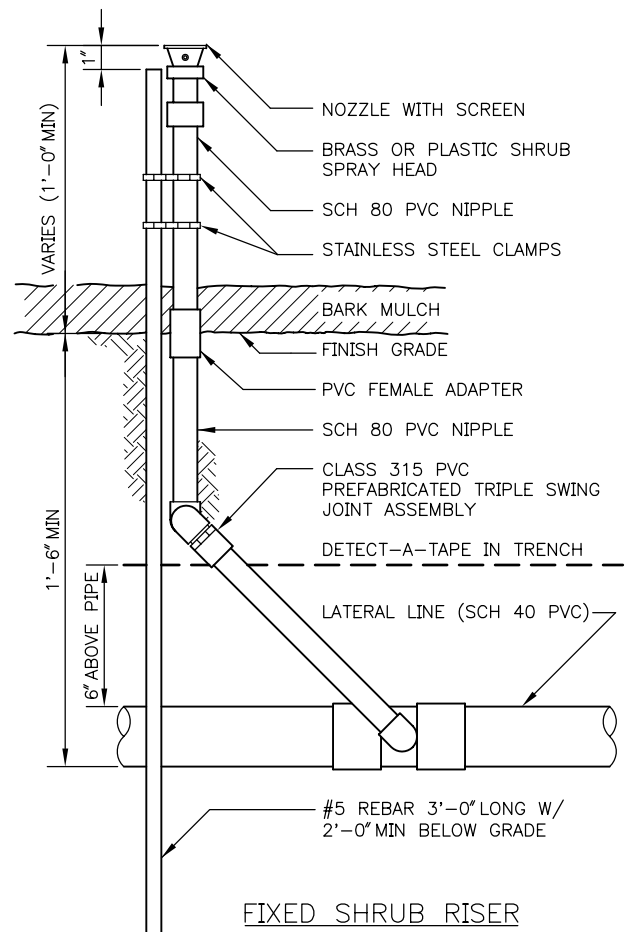
## REV DATE: 2003

NOTE:  
USE TEFLON TAPE ON  
ALL THREADED FITTINGS

POP UP ROTOR HEAD  
TURF AREAS



POP UP SPRAY HEAD  
(SHRUB BED AREAS)  
AT EDGE OF PAVEMENT



FIXED SHRUB RISER  
SHRUB BED AREAS

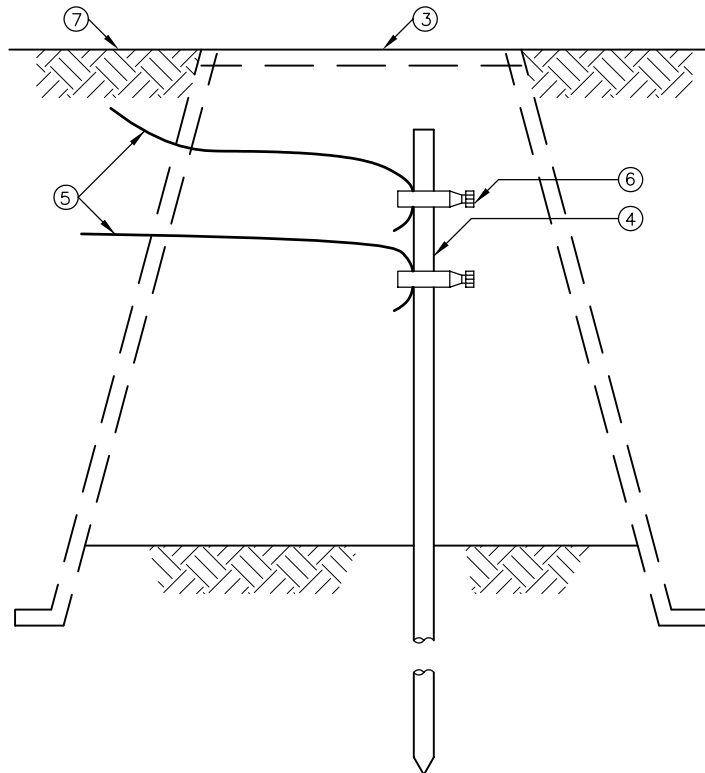
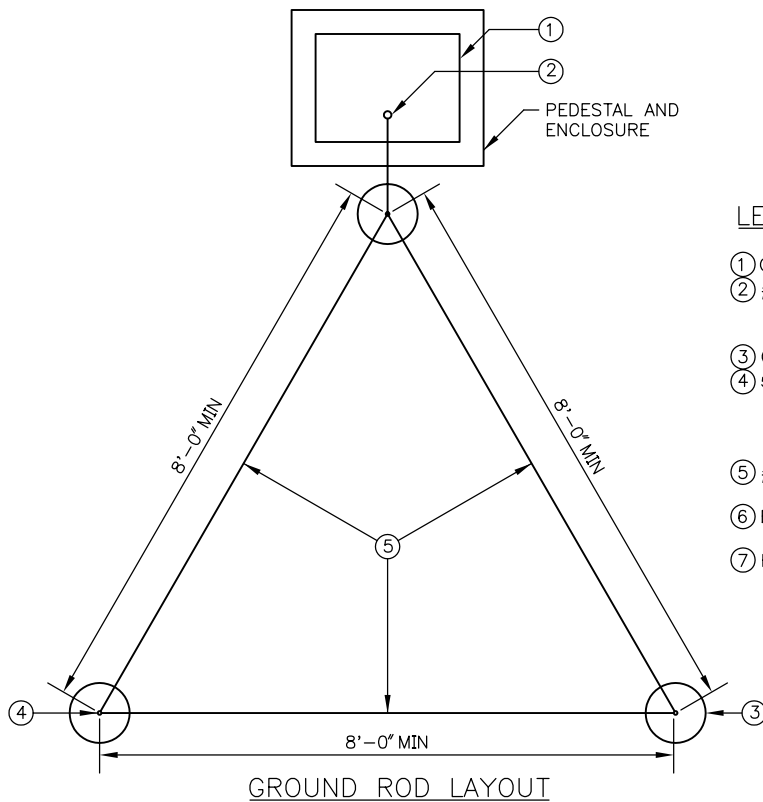
REF STD SPEC SEC 8-03



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## POP UP & FIXED IRRIGATION HEADS



REF STD SPEC SEC 8-03



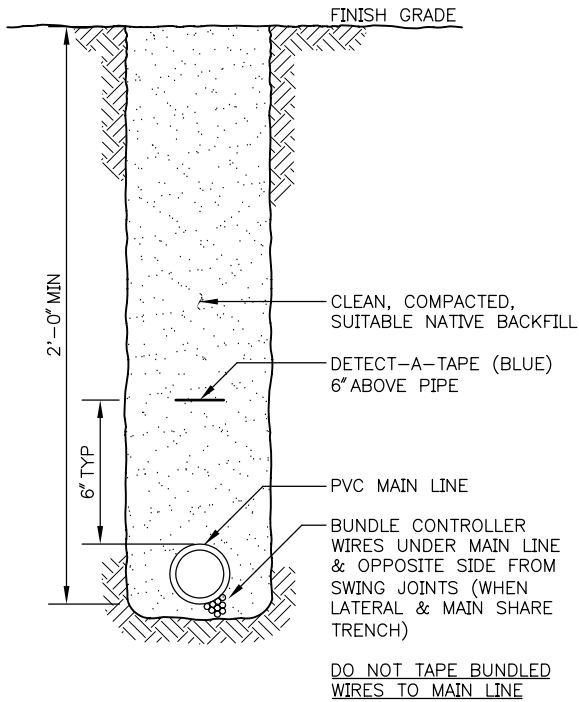
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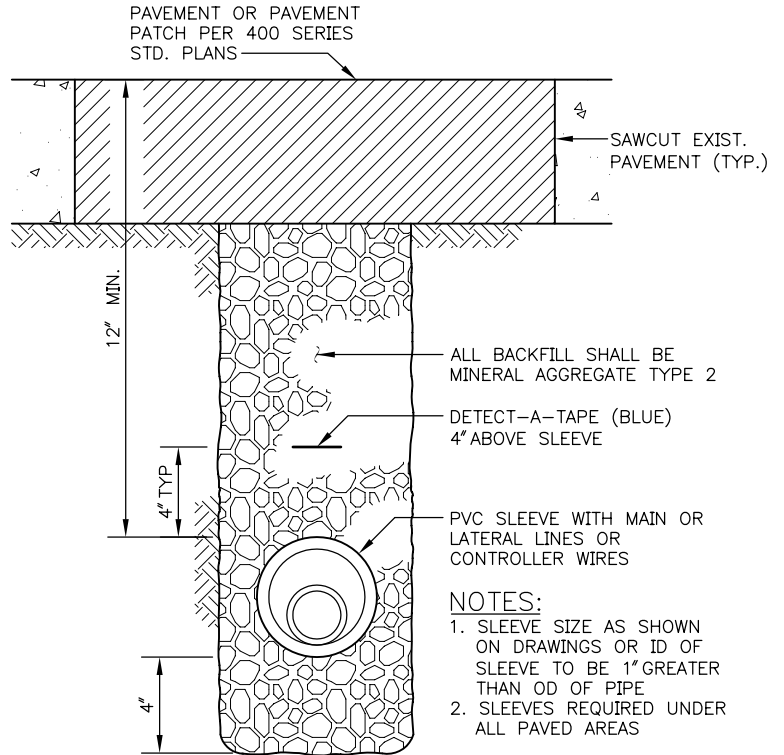
IRRIGATION CONTROLLER  
PEDESTAL AND ENCLOSURE  
GROUNDING

# STANDARD PLAN NO 128

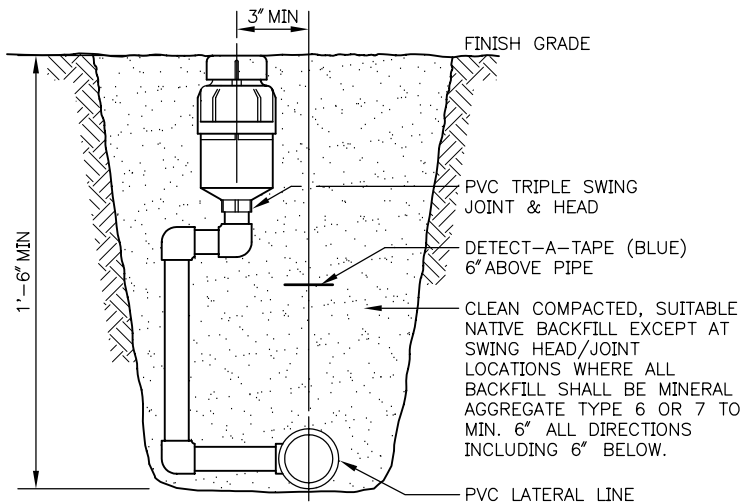
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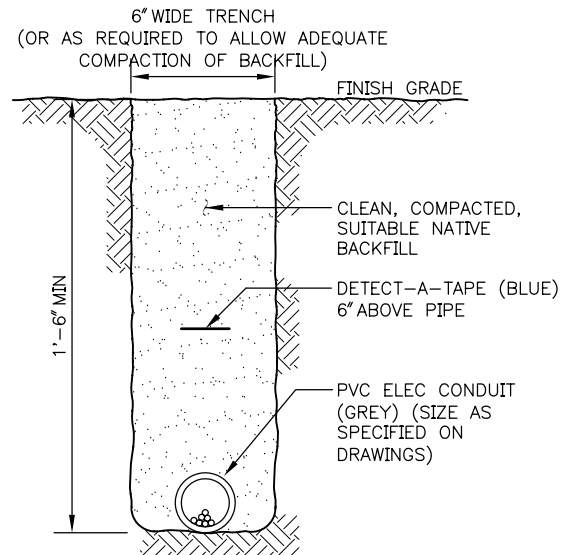
MAIN LINE



SLEEVE TRENCHING



LATERAL LINE



POWER SUPPLY TRENCH

REF STD SPEC SEC 8-03



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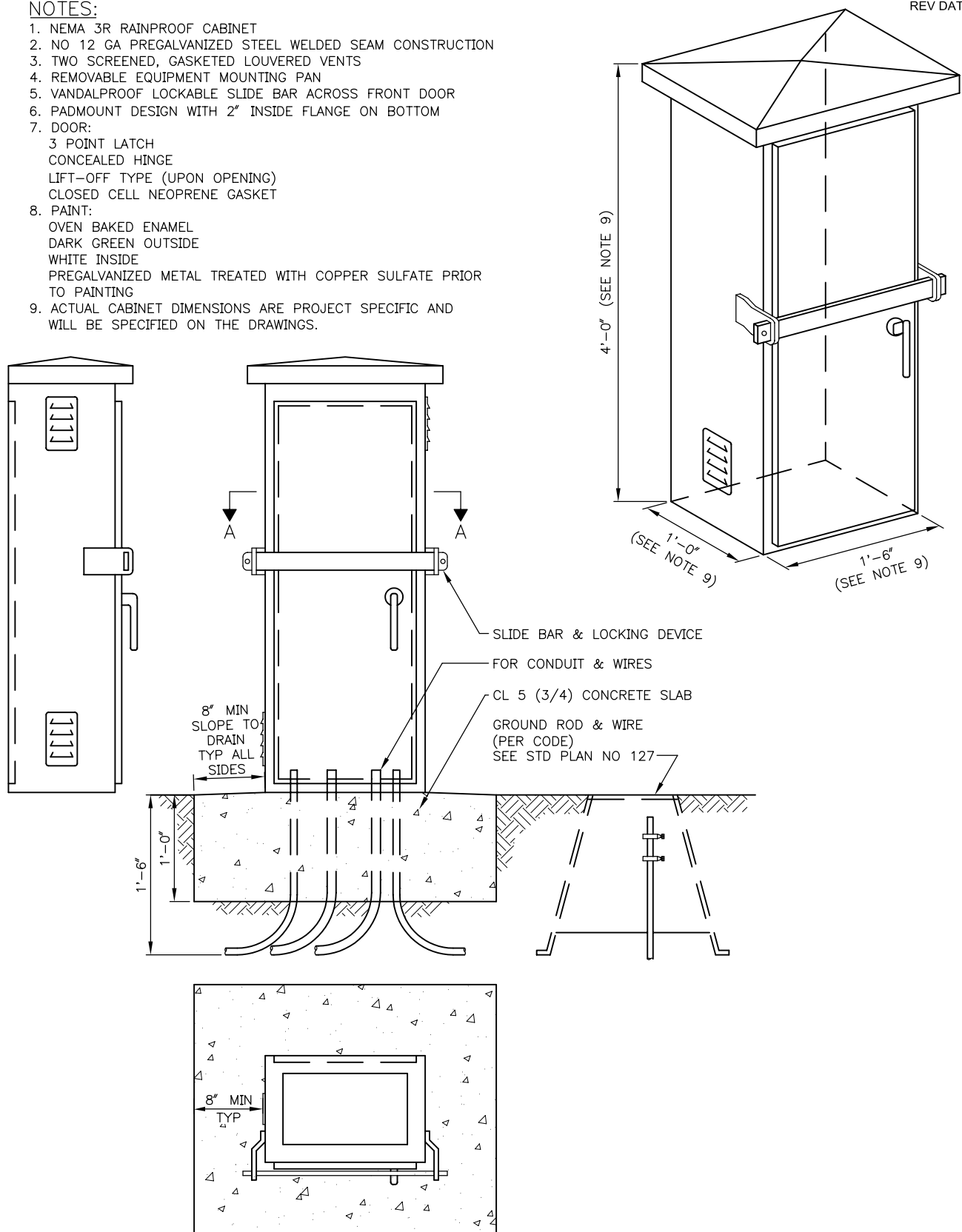
IRRIGATION TRENCHES

# STANDARD PLAN NO 129

REV DATE: 2003

## NOTES:

1. NEMA 3R RAINPROOF CABINET
2. NO 12 GA PREGALVANIZED STEEL WELDED SEAM CONSTRUCTION
3. TWO SCREENED, GASKETED LOUVERED VENTS
4. REMOVABLE EQUIPMENT MOUNTING PAN
5. VANDALPROOF LOCKABLE SLIDE BAR ACROSS FRONT DOOR
6. PADMOUNT DESIGN WITH 2" INSIDE FLANGE ON BOTTOM
7. DOOR:
  - 3 POINT LATCH
  - CONCEALED HINGE
  - LIFT-OFF TYPE (UPON OPENING)
  - CLOSED CELL NEOPRENE GASKET
8. PAINT:
  - OVEN BAKED ENAMEL
  - DARK GREEN OUTSIDE
  - WHITE INSIDE
  - PREGALVANIZED METAL TREATED WITH COPPER SULFATE PRIOR TO PAINTING
9. ACTUAL CABINET DIMENSIONS ARE PROJECT SPECIFIC AND WILL BE SPECIFIED ON THE DRAWINGS.



SECTION A-A

REF STD SPEC SEC 8-03

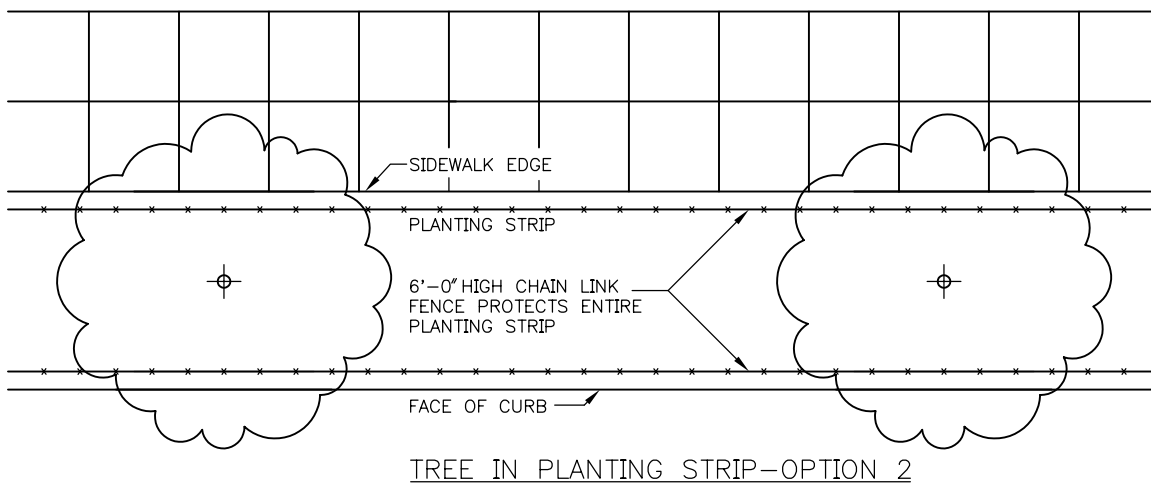
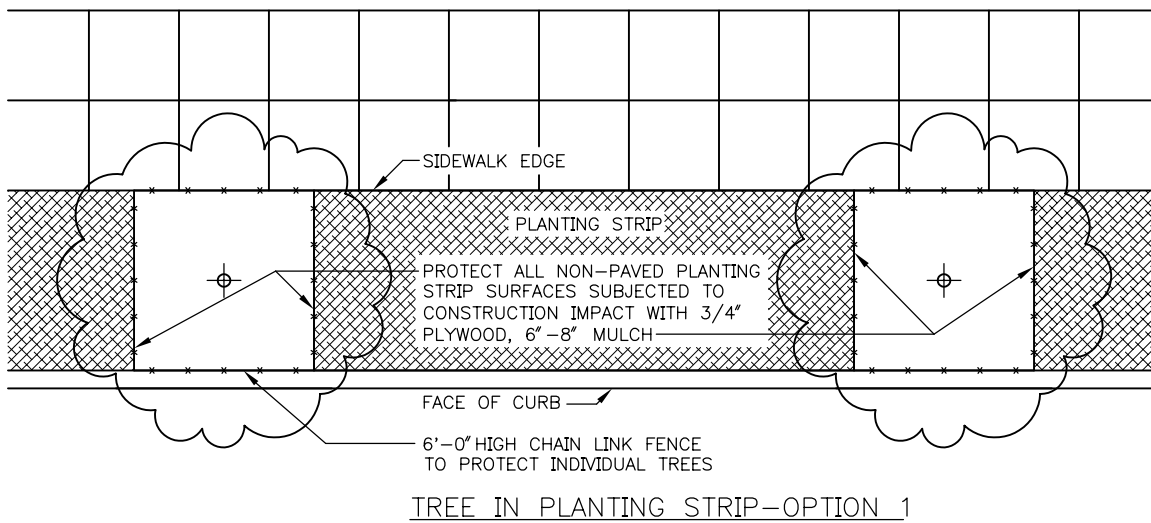
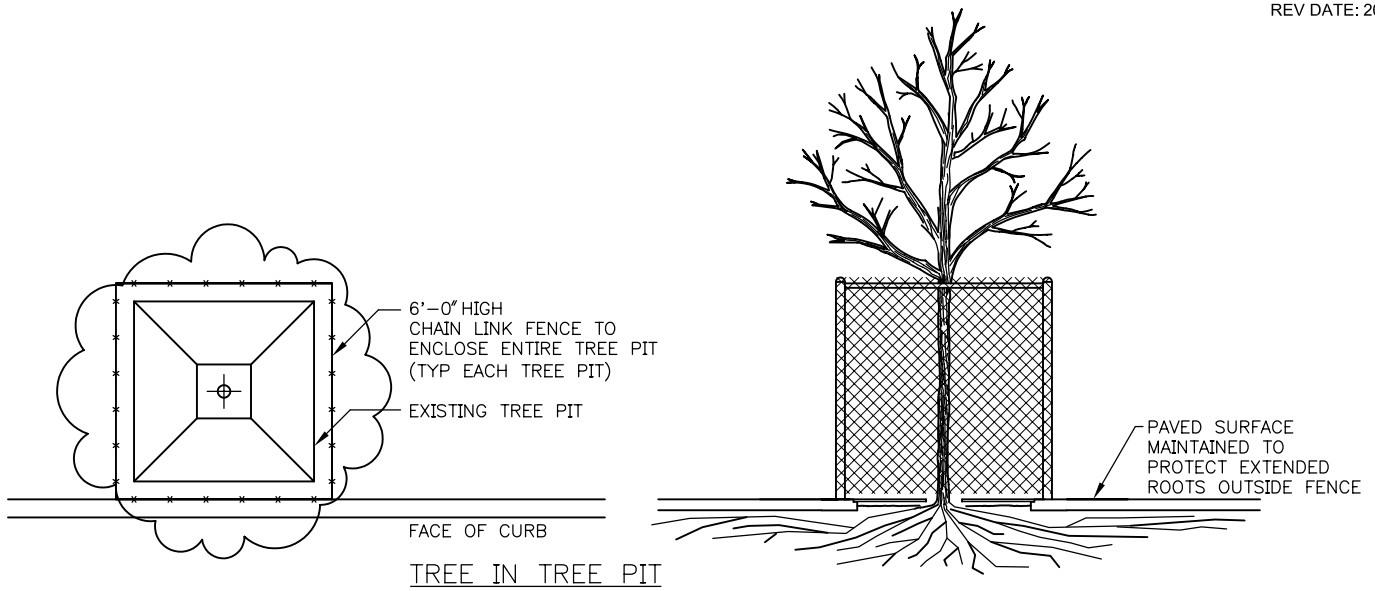


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IRRIGATION  
CONTROLLER CABINET





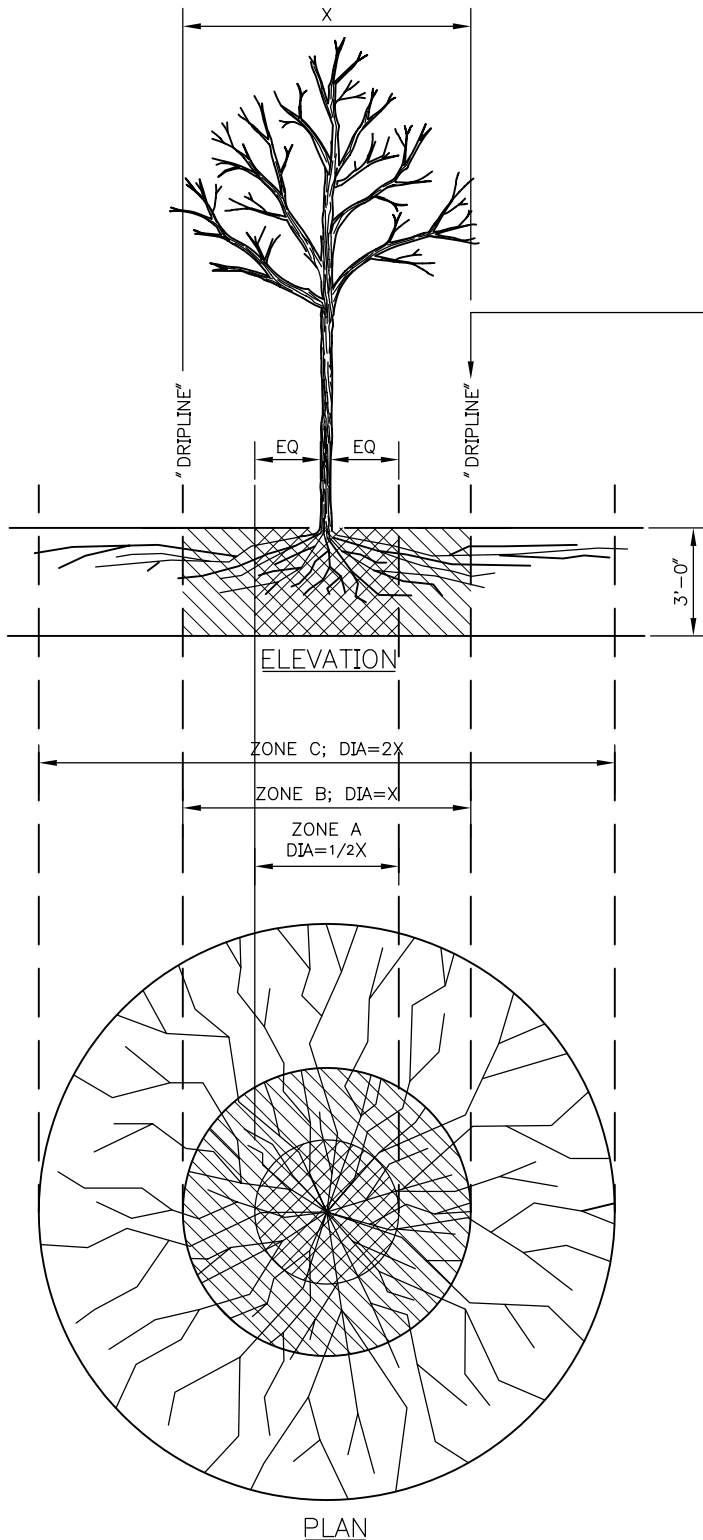
REF STD SPEC SEC 1-07.16(2)



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TREE PROTECTION  
DURING CONSTRUCTION



## FENCING/ROOT PROTECTION

- CHAIN LINK FENCING TO BE PROVIDED AND MAINTAINED AT DRIPLINE

ENGINEER'S APPROVAL REQUIRED FOR USE/ACCESS  
WITHIN ZONE B. PERMISSION FOR USE/ACCESS REQUIRES  
SURFACE PROTECTION FOR ALL UNFENCED, UNPAVED  
SURFACES WITHIN ZONE B

### \* SURFACE PROTECTION MEASURES

1. MULCH LAYER, 6" - 8" DEPTH
2. 3/4" PLYWOOD
3. STEEL PLATES

## TRENCHING/EXCAVATION

ZONE A (CRITICAL ROOT ZONE)

1. NO DISTURBANCE ALLOWED WITHOUT SITE-SPECIFIC INSPECTION AND APPROVAL OF METHODS TO MINIMIZE ROOT DAMAGE
2. SEVERANCE OF ROOTS LARGER THAN 2" DIA REQUIRES ENGINEER'S APPROVAL
3. TUNNELING REQUIRED TO INSTALL LINES 3'-0" BELOW GRADE OR DEEPER

ZONE B (DRIPLINE)

1. OPERATION OF HEAVY EQUIPMENT AND/OR STOCKPILING OF MATERIALS SUBJECT TO ENGINEERS APPROVAL.  
SURFACE PROTECTION\* MEASURES REQUIRED
2. TRENCHING ALLOWED AS FOLLOWS:
  - EXCAVATION BY HAND OR WITH HAND-DRIVEN TRENCHER MAY BE REQUIRED
  - LIMIT TRENCH WIDTH. DO NOT DISTURB ZONE A  
MAINTAIN 2/3 OR MORE OF ZONE B IN UNDISTURBED CONDITION
3. TUNNELING MAY BE REQUIRED FOR TRENCHES DEEPER THAN 3'-0"

ZONE C (FEEDER ROOT ZONE)

1. OPERATION OF HEAVY EQUIPMENT AND/OR STOCKPILING OF MATERIALS SUBJECT TO ENGINEERS APPROVAL. SURFACE PROTECTION\* MEASURES MAY BE REQUIRED
2. TRENCHING WITH HEAVY EQUIPMENT ALLOWED AS FOLLOWS:
  - MINIMIZE TRENCH WIDTH
  - MAINTAIN 2/3 OR MORE OF ZONE C IN UNDISTURBED CONDITION

REF STD SPEC SEC 1-07.16 (2)



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## TREE PROTECTION DURING TRENCHING, TUNNELING OR EXCAVATION

		TREES IN PLANTING STRIPS	TREES IN TREE PITS
HEAVY EQUIPMENT OPERATION	ROOT PROTECTION	<p>ALL NON-PAVED PLANTING STRIP SURFACES SUBJECT TO IMPACT (COMPACTION) BY CONSTRUCTION ACTIVITY SHALL BE PROTECTED WITH 6"-8" MULCH LAYER OR 3/4" PLYWOOD PANELS</p> <p>PROVIDE WOOD PLANKING OR STEEL PANELS UNDER BACKHOE STABILIZERS PLACED ANYWHERE IN THE PLANTING STRIP [1-07.16(2)]</p> <p>NO STORAGE OF MATERIALS OR EQUIPMENT IN THE PLANTING STRIP SHALL BE ALLOWED WITHOUT PROPER SURFACE PROTECTION <u>AND</u> WRITTEN AUTHORIZATION FROM THE ENGINEER</p>	<p>RETAIN EXISTING PAVING DURING CONSTRUCTION</p> <p>SCHEDULE PAVEMENT REPLACEMENT TO MINIMIZE EXPOSURE OF SURFACE ROOTS TO DRYING, EQUIPMENT DAMAGE, COMPACTION, ETC. EXPOSURE FOR LONGER THAN 48 HOURS REQUIRES MULCH APPLICATION</p>
	CANOPY PROTECTION	OVERHEAD BRANCHING LIKELY TO BE DAMAGED BY EQUIPMENT OPERATION SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER WITH PREVENTIVE MEASURES (PRUNING OR TIE-BACK OF BRANCHES) APPROVED BY THE ENGINEER AND PROPERLY EXECUTED BEFORE COMMENCEMENT OF THE WORK	
	TRUNK PROTECTION	PROVIDE CHAIN LINK CONSTRUCTION FENCE IN INDIVIDUAL FENCE INSTALLATIONS FOR EACH TREE OR THE LENGTH OF THE PLANTING STRIP.	PROVIDE 5'-0" MIN HEIGHT FENCE INSTALLATIONS FOR EACH TREE TO ENCLOSE ENTIRE TREE PIT OPENING.
SIDEWALK RECONSTRUCTION		<p>ROOT PRUNE <u>ONLY</u> AS APPROVED BY THE ENGINEER</p> <p>MAINTAIN 2'-0" <u>MIN</u> CLEARANCE FROM FLARE OF TRUNK WHEN SETTING FORMS.</p>	PROVIDE 5'-0" X 5'-0" OR 4'-0" X 6'-0" (24 SQ FT MIN) TREE PITS IN NEW SIDEWALK FOR <u>NEW</u> TREES. TREE PIT SIZE FOR EXISTING TREES SHALL BE ELONGATED (8'-0" TO 12'-0" +). PITS MAY BE REQUIRED TO MINIMIZE ROOT IMPACTS WHILE MAINTAINING REQUIRED SIDEWALK WIDTH
TRENCH OR TUNNELING		SEE STD PLAN NO 133	

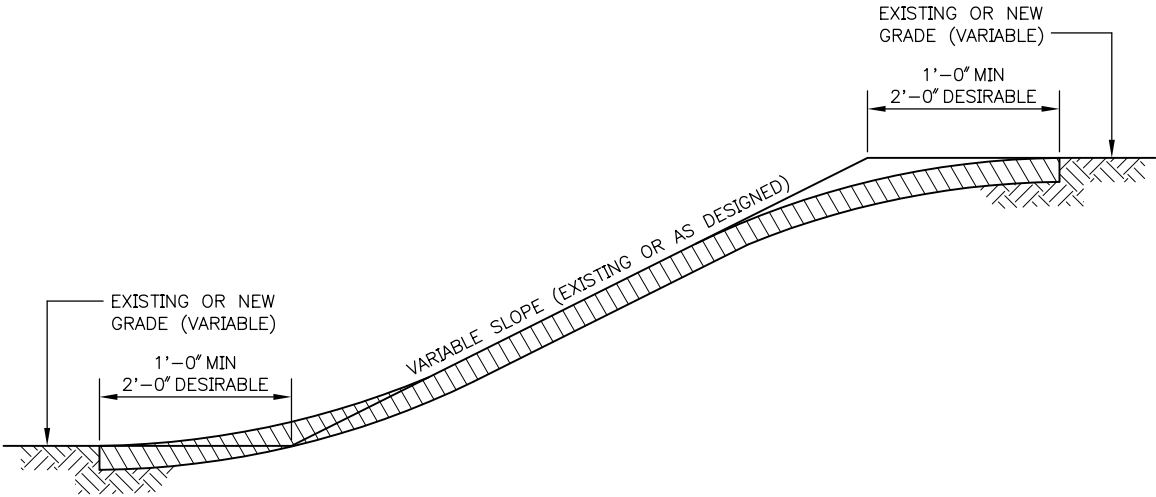
REF STD SPEC SEC 1-07.16(2)



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CONSTRUCTION AROUND  
EXISTING TREES



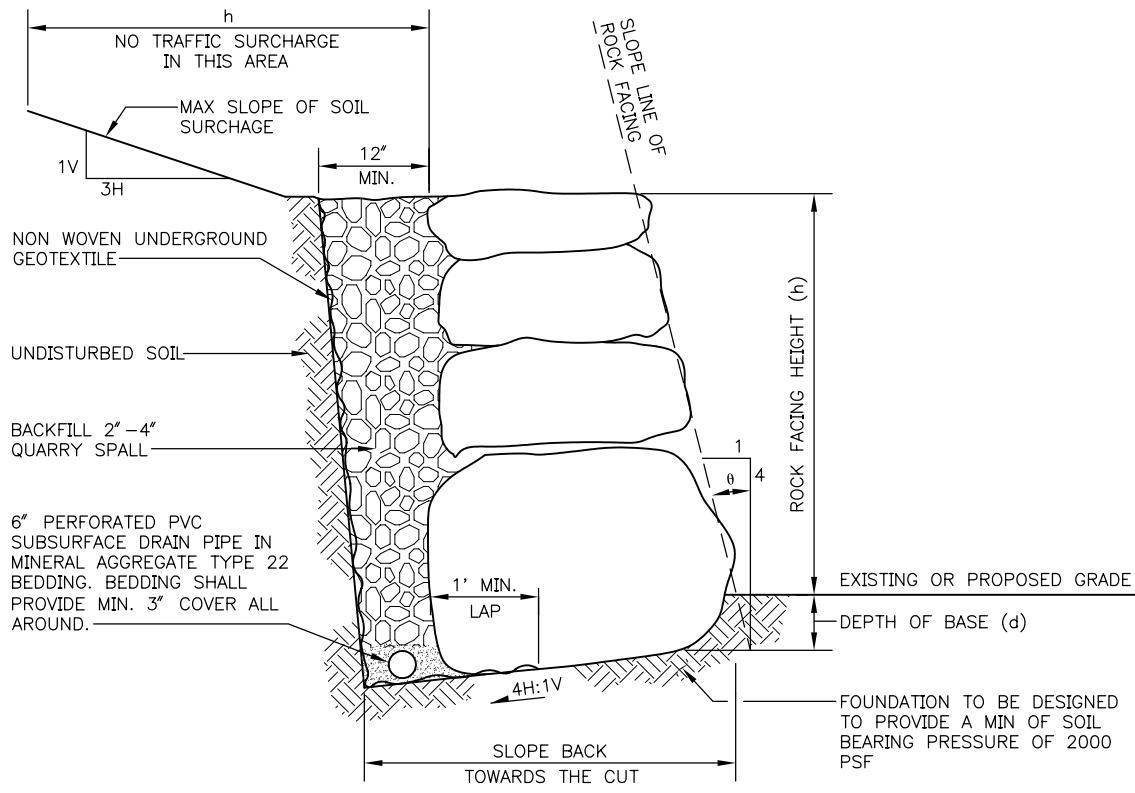
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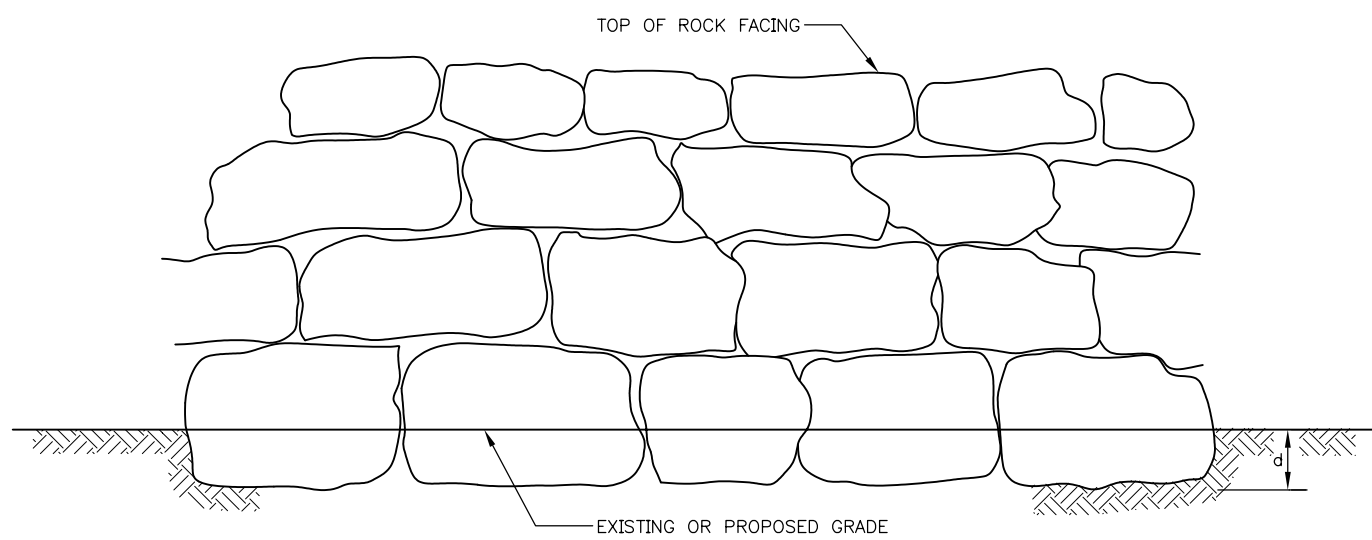
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SLOPE ROUNDING



SECTION



ELEVATION

		MINIMUM ROCK	
(h)	(d)	SIZE(BASE)	SIZE(TOP)
2 FEET	3 INCHES	2-MAN	1-MAN
4 FEET	6 INCHES	3-MAN	2-MAN
6 FEET	9 INCHES	4-MAN	2-MAN
8 FEET	12 INCHES	5-MAN	2-MAN

$\phi = 14^{\circ} \pm 1^{\circ}$

REF STD SPEC SEC 2-08



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ROCK FACING